

e-Photo Quiz

THE CASE: This 23-month-old Hispanic boy was brought to the ED with ear pain and fever. Examination revealed an inflamed tympanic membrane as well as skin discoloration on the chest that looked like bruising, which the family could not explain. There was no other indication of abuse. The mother was certain that the discoloration had not been present earlier in the day. CBC, PT, and PTT results were normal. Child protective services was notified of possible non-accidental injury.

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likely diagnosis?

- A. Atopic dermatitis
- B. Phytophotodermatitis
- C. Child abuse -- INCORRECT
- D. Food allergy

The correct answer was: B. Phytophotodermatitis.

Table – Common foods, weeds, and grasses that contain psoralen*

Foods	Weeds and grasses
Carrots	Buttercups
Celery	Clover
Dill	Cocklebur
Figs	Giant hogweed
Lemons	Meadow grasses
Limes	Parsnips
Mango	Pigweed
Parsley	Shepherd's purse
	Wheat

*The chemical photosensitizer responsible for phytophotodermatitis when combined with UV light in the 320- to 380-nm range.
Modified from Hurwitz S, ed. *Clinical Pediatric Dermatology. A Textbook of Skin Disorders of Childhood and Adolescence*. 1993.³



DISCUSSION: On close questioning, the child's mother volunteered that she had been preparing one of her meals with fresh limes. She recalled that while cooking, she had repeatedly picked up her child without washing her hands and was certain that the child's bare skin had been touched in the process. This detail coupled with the results of the child's physical examination led to a diagnosis of **phytophotodermatitis** (PPD). The family was cleared of allegations of abuse.

The term "phytophotodermatitis" was first used to describe this condition in 1942 by Dr Robert Klaber.¹ Much of what is still considered to be fact about this condition was written in his article. Dermatitis from plant material had been described for many years, but the connection with light—specifically ultraviolet light—had not been made. Klaber reviewed a number of case reports and clinical studies to describe the spectrum of the disorder.

Psoralen in combination with UV light in the 320- to 380-nm range is the chemical photosensitizer responsible for PPD.² Cell death and inhibition of mitosis are caused by the cross-linking of DNA with psoralen. Psoralen is present in a number of ordinary foods and in a variety of weeds and grasses that are common in urban areas (**Table**).³ Cooks, grocers, and gardeners are prone to PPD. There are case reports of PPD caused by airborne plant particulate matter from lawn tools.⁴

PPD occurs more frequently in the late summer when doses of UV light are high. The heat and humidity of summer months also accentuate the reaction. Typically, the onset of symptoms is within 24 to 48 hours after exposure. The first sign may be painful erythema and local edema. Other reactions may start with hyperpigmentation. More intense reactions may progress to blisters and ultimately to bullae. The degree of reaction is thought to be dose-related and dependent on individual patient's skin pigmentation. Persons with light skin are more vulnerable to PPD.

PPD may last weeks to months in certain patients. In some, permanent scarring results. Treatment should be tailored to the intensity of the dermatitis. Patients with mild to moderate symptoms may benefit from high potency topical corticosteroids. Those with severe manifestations are treated with systemic corticosteroids. For hyperpigmentation, no treatment is necessary, even if it persists for months.

THE KEY POINTS

While this patient's case was straightforward once all the facts were exposed, it illuminates the following key points:

- PPD can be initiated by a vast number of activities and exposures. Children have possible multiple exposures to psoralen on any given day.
- Abuse can often be included in the differential diagnosis in children who present to the ED. Thus, clinicians need to be aware of the conditions that mimic abuse.^{5,6} PPD can be included in any differential diagnosis in patients who present with burns or bruising.

This patient's case also points out the need for emergent/emergency referral resources to limit the disruption of daily family life by unfounded referrals.⁷

REFERENCES:

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